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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,003	08/26/2003	Angelo Truncale	60000500-1011	3313
26263	7590	11/30/2004	EXAMINER	
SONNENSCHN NATH & ROSENTHAL LLP P.O. BOX 061080 WACKER DRIVE STATION, SEARS TOWER CHICAGO, IL 60606-1080			HANLEY, JOHN C	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/648,003	Applicant(s) TRUNCALE, ANGELO	
	Examiner John C Hanley	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/26/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kau (US-5067084).

3. Kau shows a roll-isolated gyro system and method for determining an absolute angular velocity of a space vehicle body 5 that is rotated during operation about an axis of rotation. The system includes a motor controlled platform 215 rigidly coupled to the vehicle body that includes a rotor shaft 217 coupled to a gyroscope 220, which rotates the gyroscope in a direction opposite to the rotational direction of the vehicle 5. A motor control 240 controls the speed of the motor such that the gyro is rotated at a speed in which the gyro output is zero. A resolver includes a member 230 and a rotating member 235 for rotation with the motor rotor 217. The resolver outputs a signal N corresponding the angular velocity of the vehicle. By operating the gyro at zero output, by turning it in the opposite direction of the vehicle at the same angular rate, the scale factor requirement for the gyro is reduced. The gyro can be a ring laser gyro, or any type of gyro. It would have been inherently obvious to one of ordinary skill in the art at the time of applicant's invention that the member 230 of the resolver would need to be coupled to the vehicle body to perform its stated function. Similarly,

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it would have been obvious that the motor in the platform would require a stator coupled to the vehicle. Official notice is given that bearings and slip rings are well-known means for supporting a rotating body with respect to a stationary body in a motor, and for passing electrical signals between the relatively movable objects. Official notice is also given of the well-known requirement of including an interface to couple signals between a sensor and a computer. It is further obvious that the intended use of the device in a broadly mentioned space vehicle would be applicable to missiles or satellites that are spin-stabilized. Further, the shape of the recited housing for the system does not appear to be critical for its operation. Thus, any housing shape for housing the numerous elements of the system would have been an obvious choice depending on the collective shape of the elements included in the system. In addition, almost any element for attaching such a housing to stabilize it with respect to the vehicle body, as schematically represented by element 219 in Kau, could be readable on the "flange" element recited in claims 3 and 11.

4. Applicant's remarks have been read and considered, but are unpersuasive. Applicant's arguments center on the issue that Kau's gyroscope axis is not aligned with the axis of rotation of the vehicle. It could be argued that parallel is inherently "aligned" in the same direction. However, Kau indicates in the Background of the Invention that the prior art rotation sensors that are being improved upon in the patent "are generally aligned with the axis about which the vehicle body spins for stabilization." Thus, it is clear from Kau alone that the axis of the gyroscope and vehicle are known to operate in "alignment", and therefore obvious to anyone of ordinary skill in the art that the axes of Kau could be collinear. While the description of the operation of the gyro Kau alone would make obvious the making of these

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axes "aligned", the description of the prior art alignment clearly indicates to do so.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

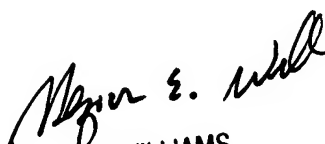
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John C Hanley whose telephone number is 571-272-2195. The examiner can normally be reached on M-F 9AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCH



HEZRON WILLIAMS
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